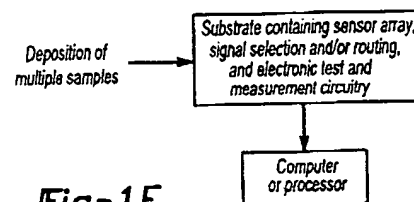
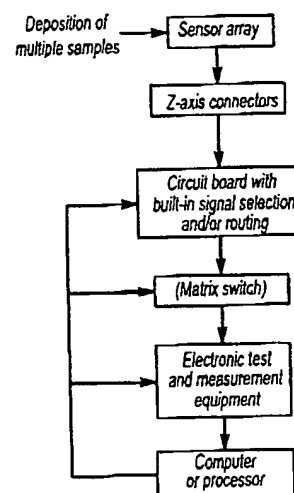
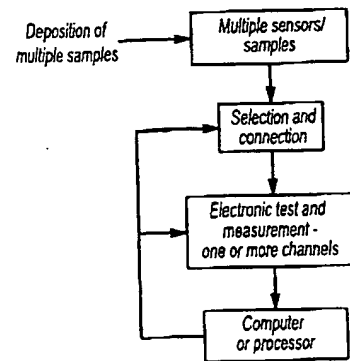
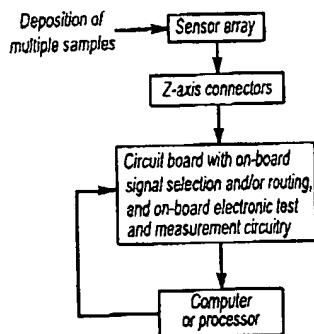
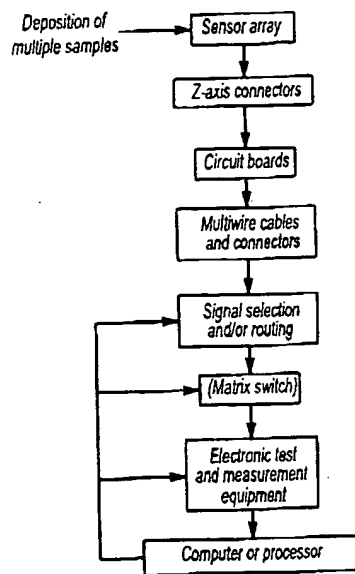
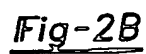
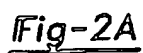


TITLE: APP/ FOR RAPID SENSOR-ARRAY BASED MATERIALS CHA  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
1/25

ZATION





TITLE: APP.

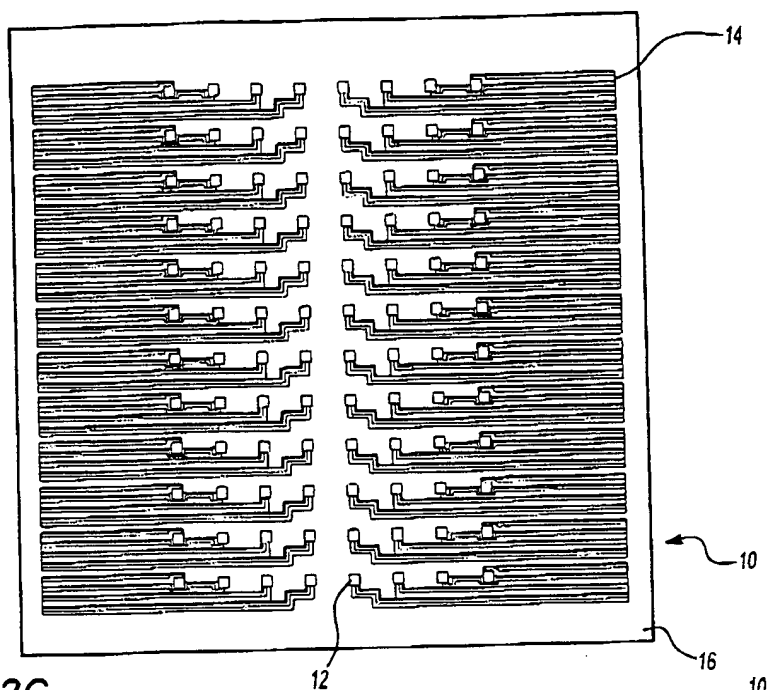
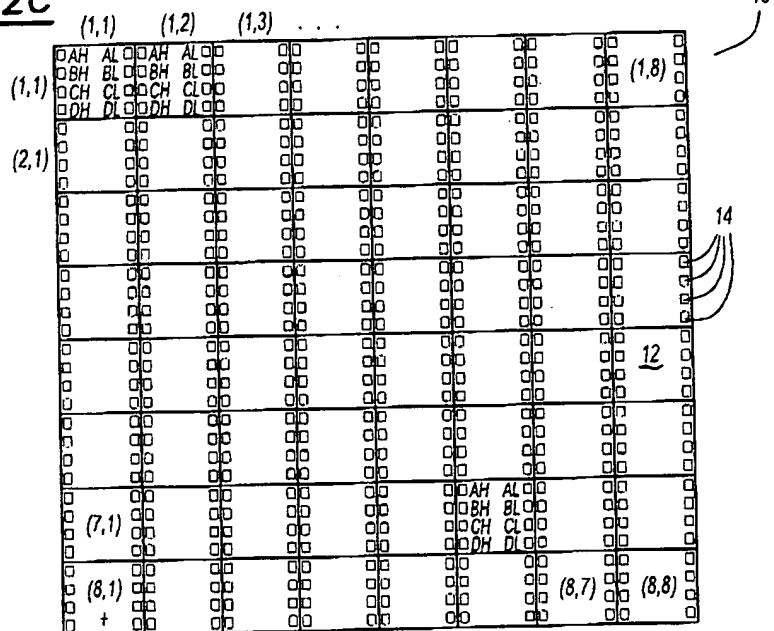
FOR RAPID SENSOR-ARRAY BASED MATERIALS CH

IZATION

APPLICANTS: PAUL MANSKY ET AL.

APPLICATION NO.: 09/210,485

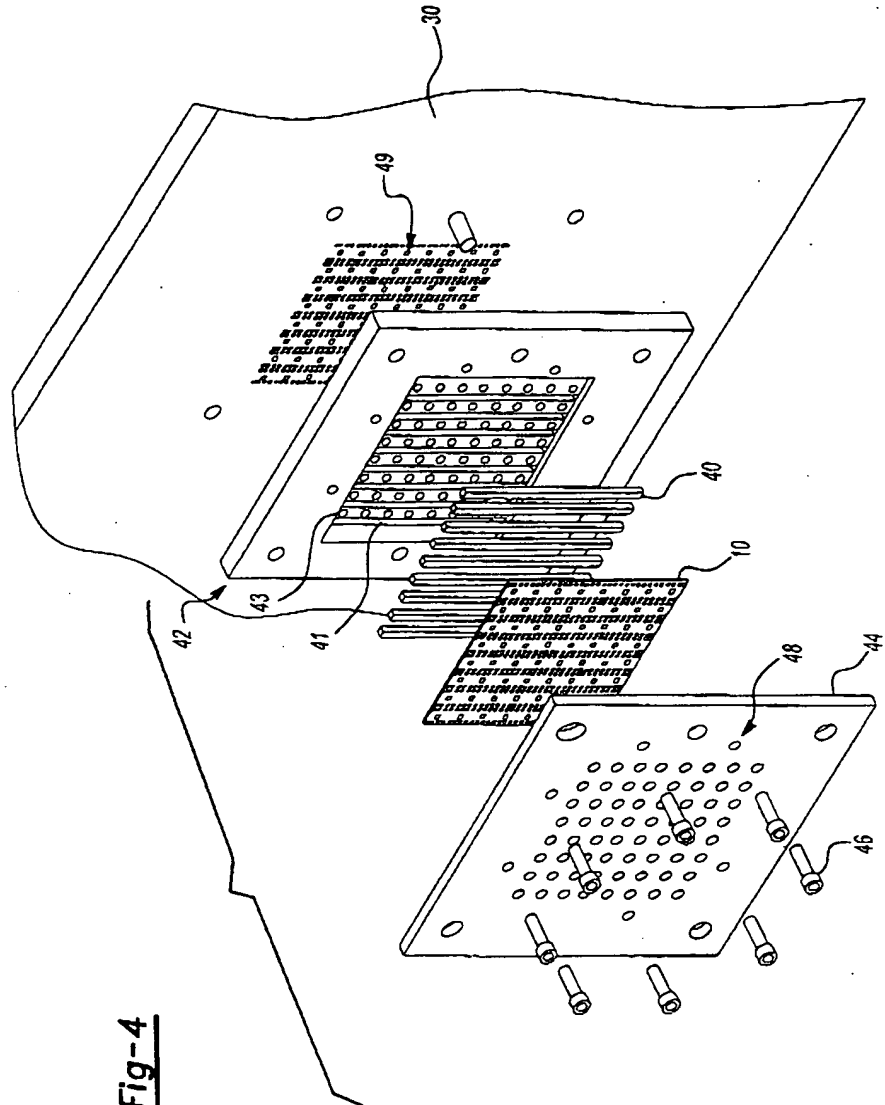
3/25

**Fig-2C****Fig-2D**





**TITLE: APPARATUS FOR RAPID SENSOR-ARRAY BASED MATERIALS CHARACTERIZATION**  
**APPLICANTS: PAUL MANSKY ET AL**  
**APPLICATION NO.: 09/210,485**  
**6/25**



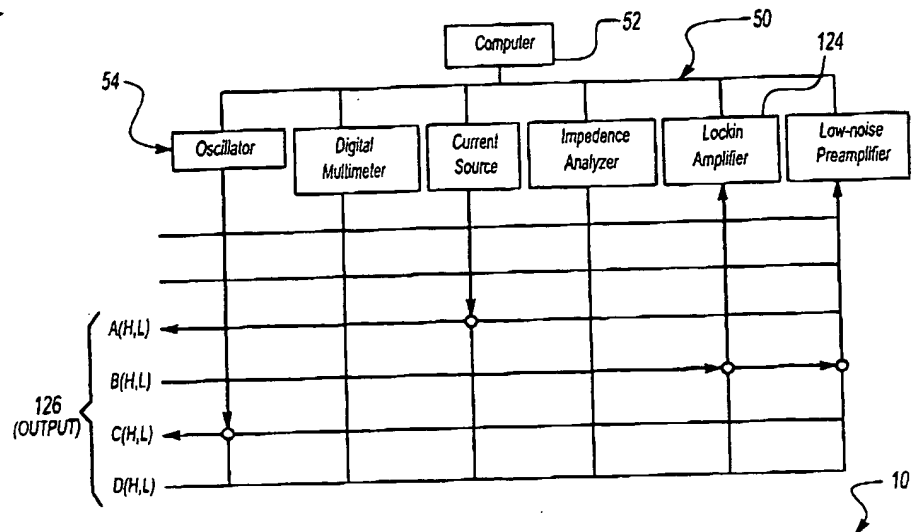


Fig-5

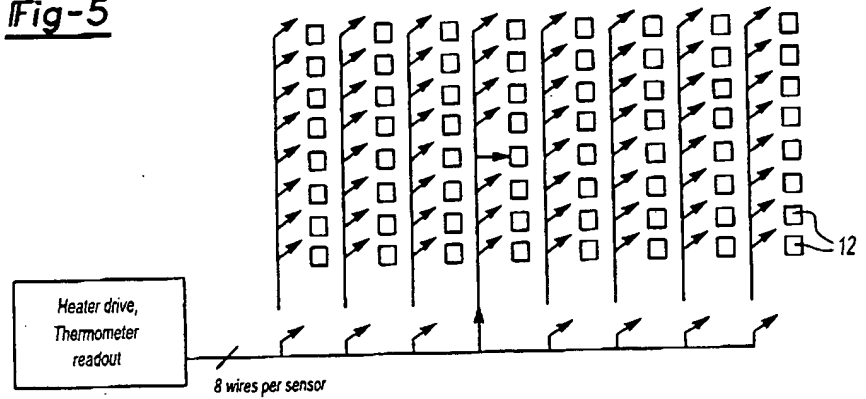


Fig-6A

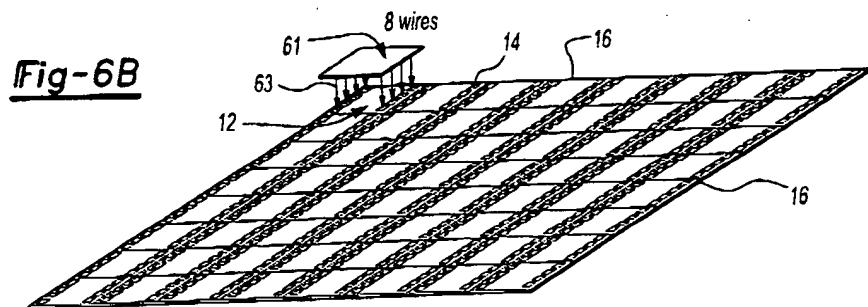
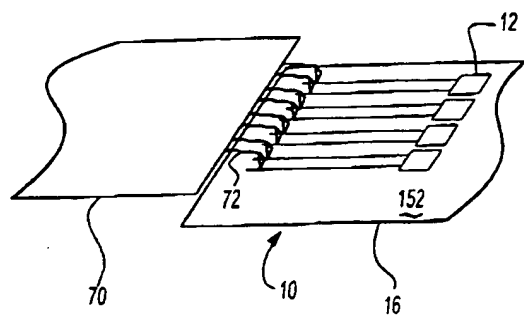
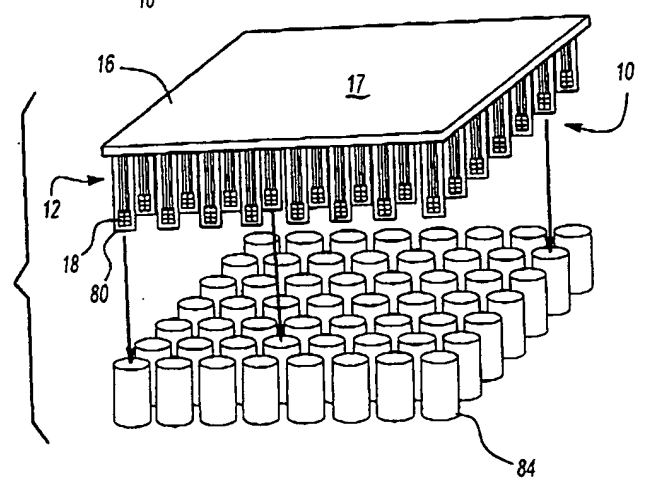


Fig-6B

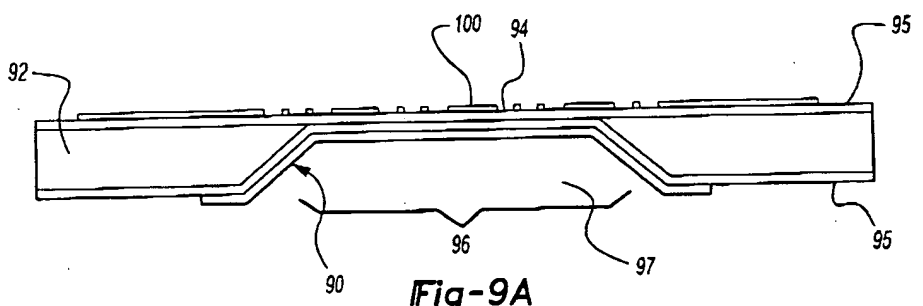
TITLE: APP. FOR RAPID SENSOR-ARRAY BASED MATERIALS CHARACTERIZATION  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
8/25



**Fig-7**

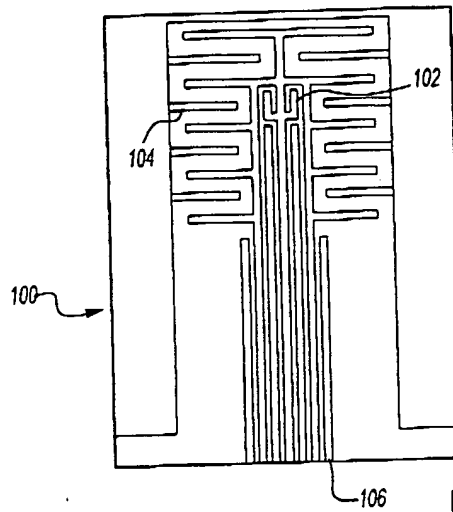
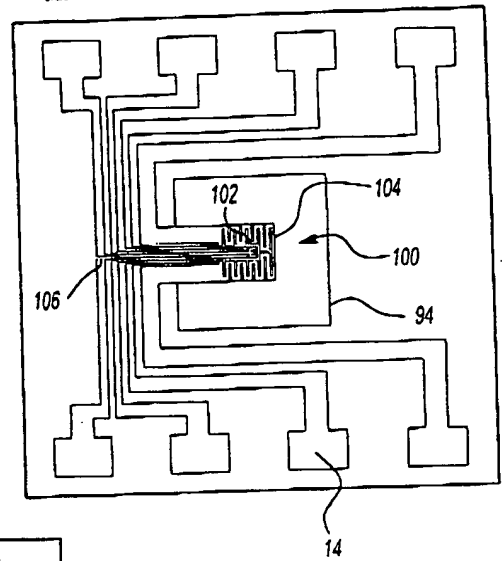


**Fig-8**



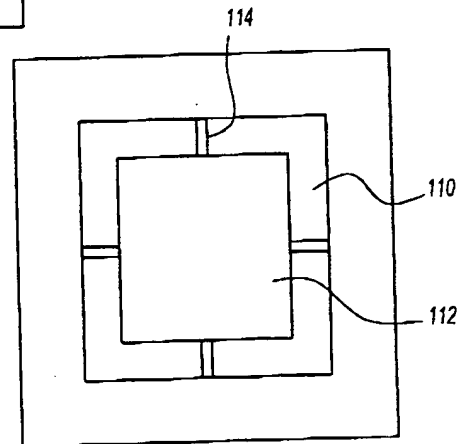
**Fig-9A**

**Fig-9B**

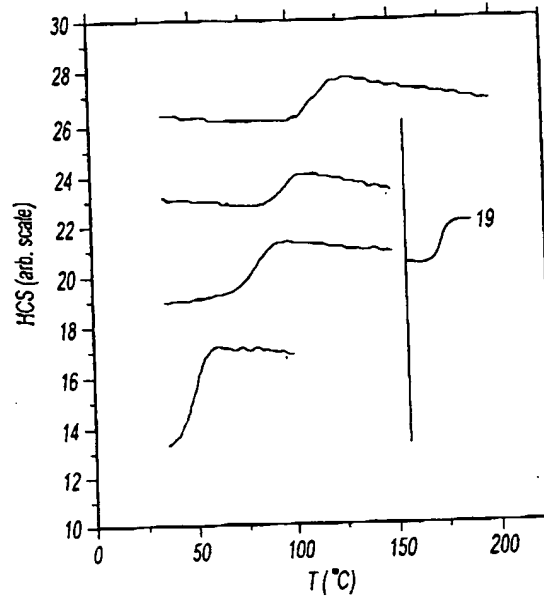


**Fig-9C**

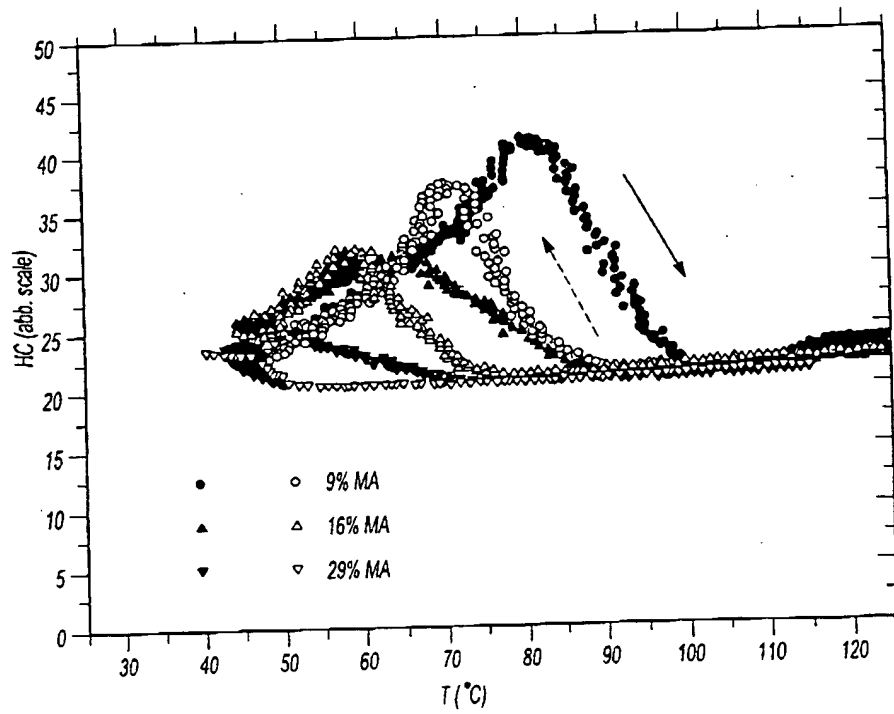
**Fig-10**



**Fig-11A**



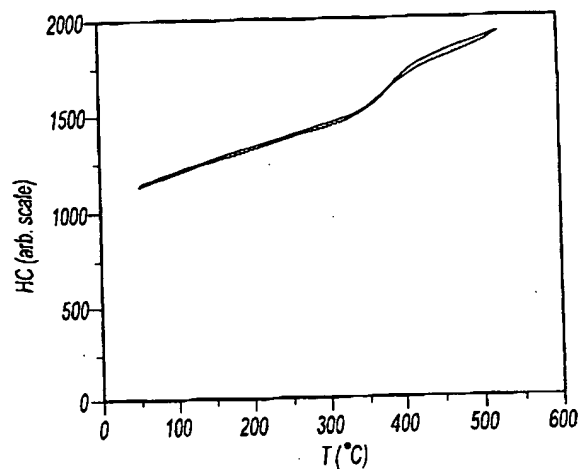
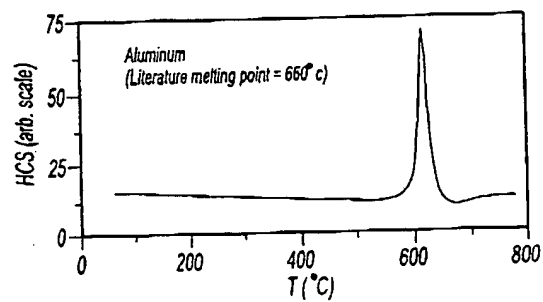
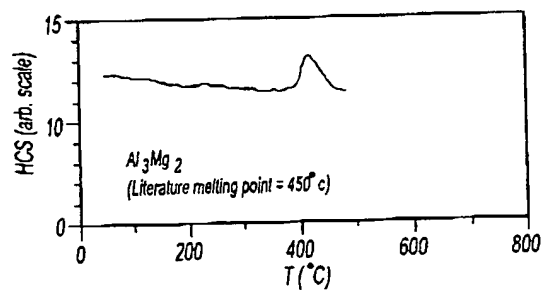
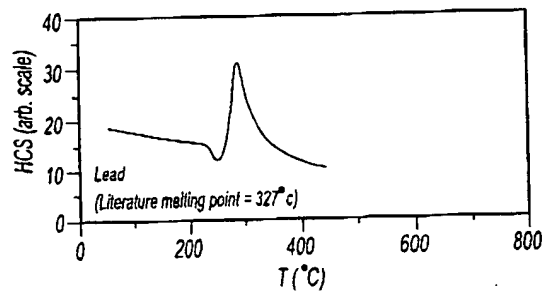
**Fig-11B**

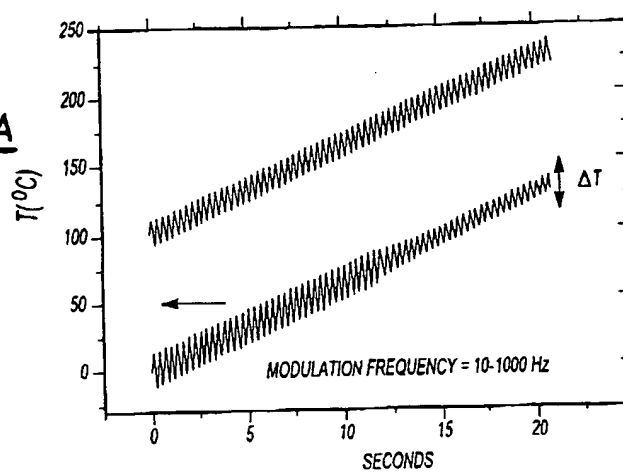
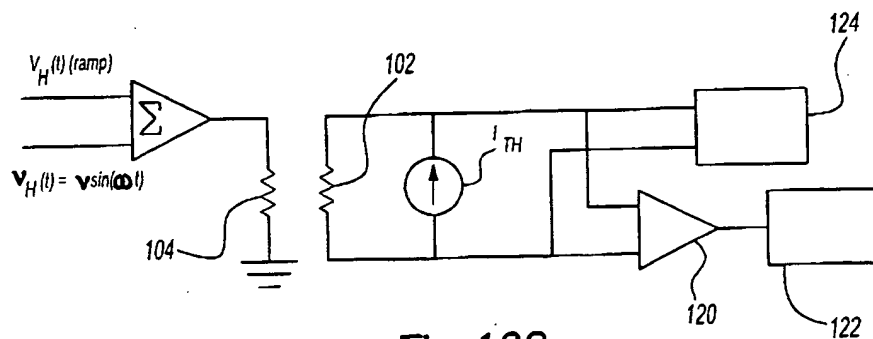
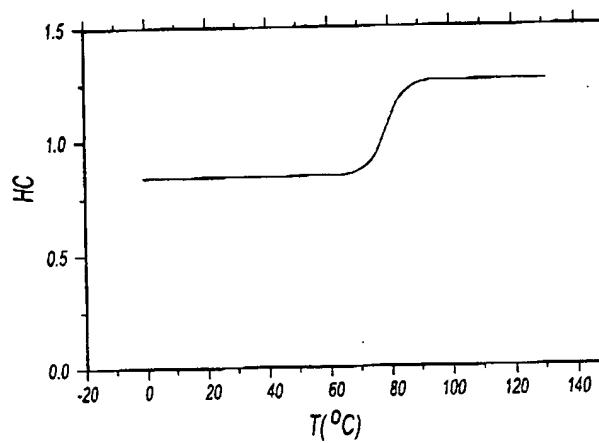


TITLE: APP.

FOR RAPID SENSOR-ARRAY BASED MATERIALS CHARACTERIZATION  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
11/25

IZATION

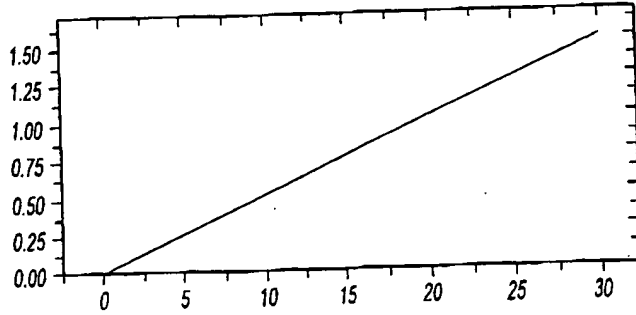
Fig-11CFig-11DFig-11EFig-11F

**Fig-12A****Fig-12B****Fig-12C**



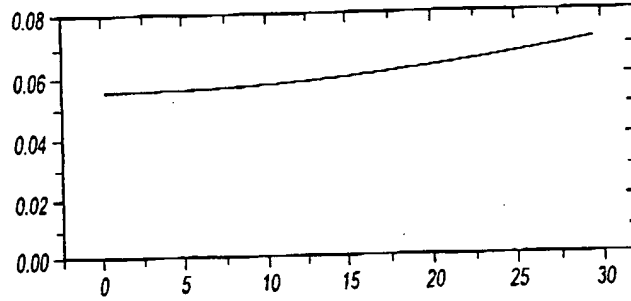
**Fig-12E**

DC HEATER  
 DRIVE VOLTAGE  
 $V_{H0}(t)$



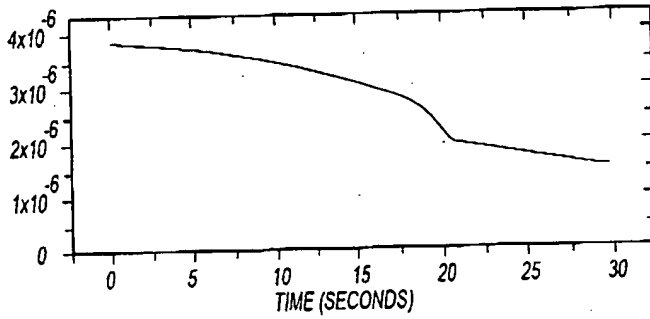
**Fig-12F**

AVERAGE THER-  
 MOMETER VOLTAGE  
 $\langle V_{TH} \rangle$



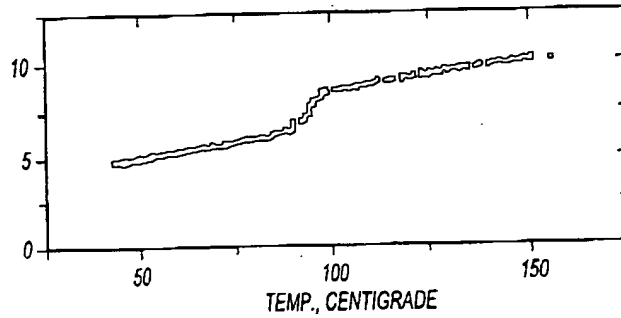
**Fig-12G**

2 $\pi$  MODULATION  
 VOLTAGE  
 $V_{TH}(2\pi)$



**Fig-12H**

HEAT CAPACITY  
 (ARB. SCALE)  $C_p$



APPLICANTS: PAUL MANSKY ET AL  
APPLICATION NO.: 09/210,485  
15/25

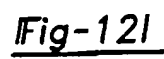


Fig-121

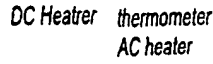
TITLE: AP'

US FOR RAPID SENSOR-ARRAY BASED MATERIALS CH

APPLICANTS: PAUL MANSKY ET AL  
APPLICATION NO.: 00210485

APPLICATION NO.: 09/210,485

16/25



Lock in at  
frequency  $3\omega$

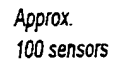


Fig-13B

TITLE: APP US FOR RAPID SENSOR-ARRAY BASED MATERIALS CHARACTERIZATION  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
17/25

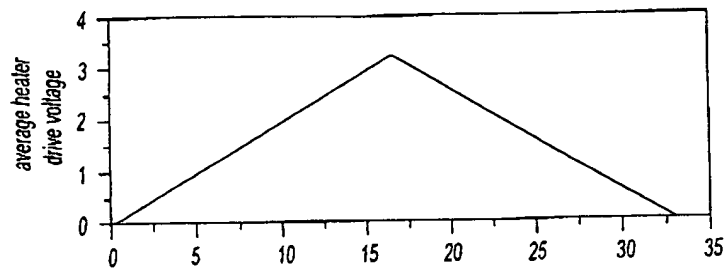


Fig-13C

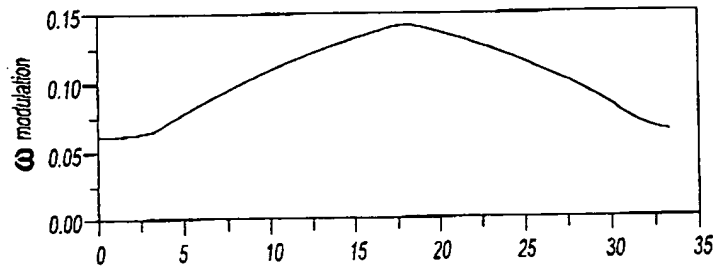


Fig-13D

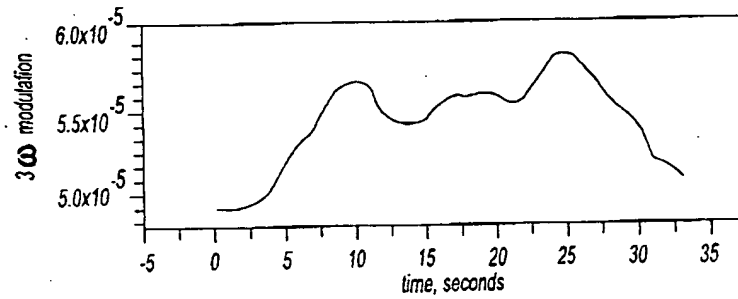


Fig-13E

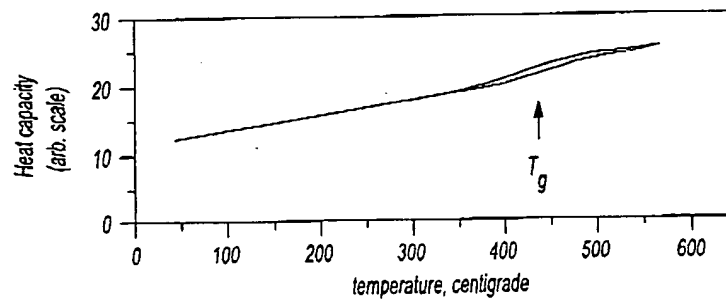
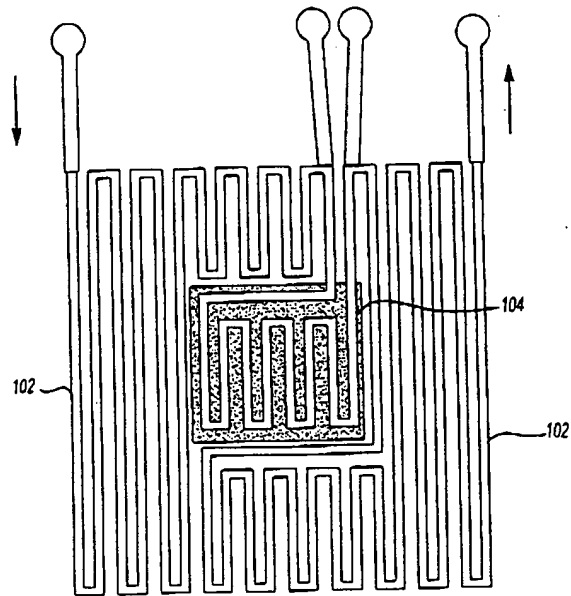


Fig-13F

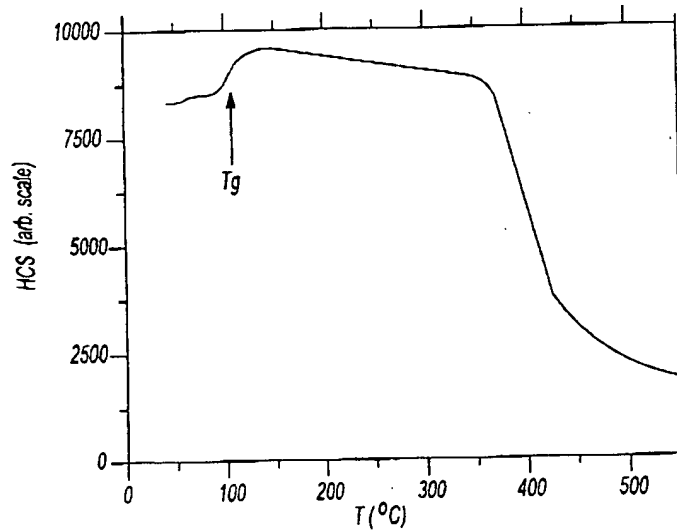
TITLE: APF .US FOR RAPID SENSOR-ARRAY BASED MATERIALS CH ERIZATION  
 APPLICANTS: PAUL MANSKY ET AL  
 APPLICATION NO.: 09/210,485  
 18/25

$$I(t) = I_0(t) + I_{AC} \sin(\omega t)$$

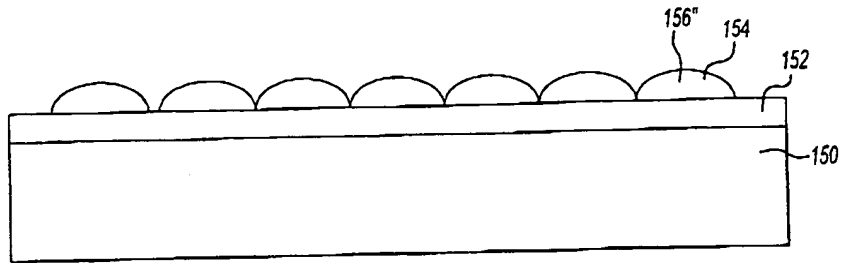
$$V_0, V(\omega, 2\omega, 3\omega)$$



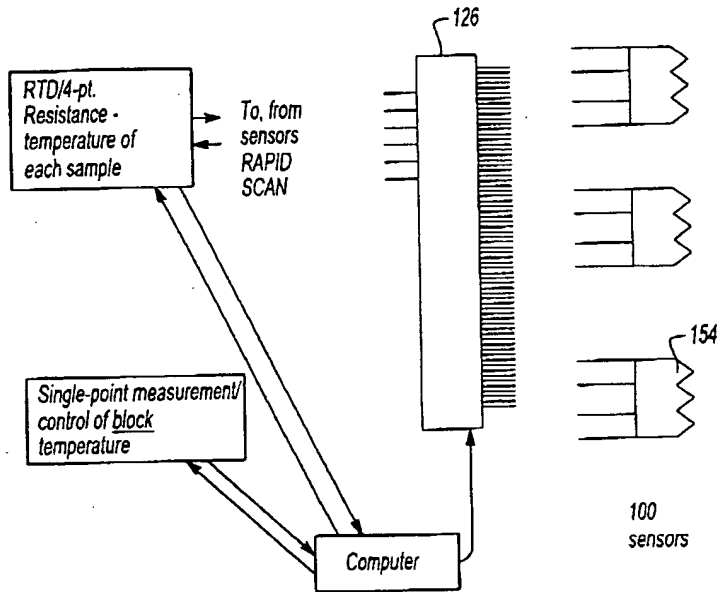
**Fig-13G**



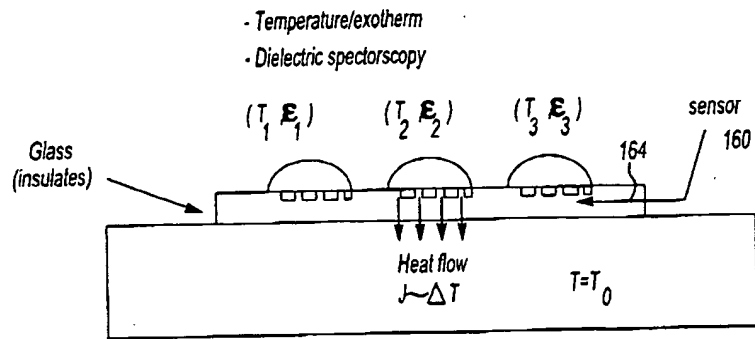
**Fig-14**



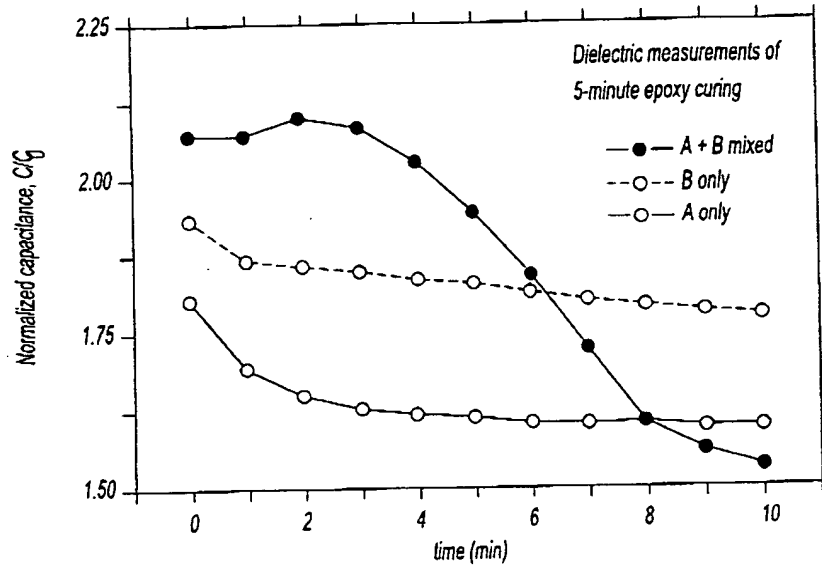
**Fig-15A**



**Fig-15B**



**Fig-16A**



**Fig-16B**

TITLE: APF JS FOR RAPID SENSOR-ARRAY BASED MATERIALS CHARACTERIZATION  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
21/25

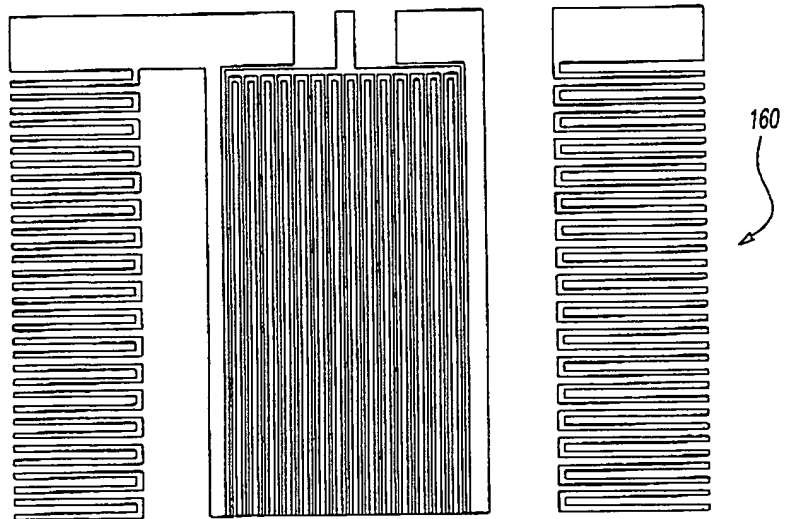
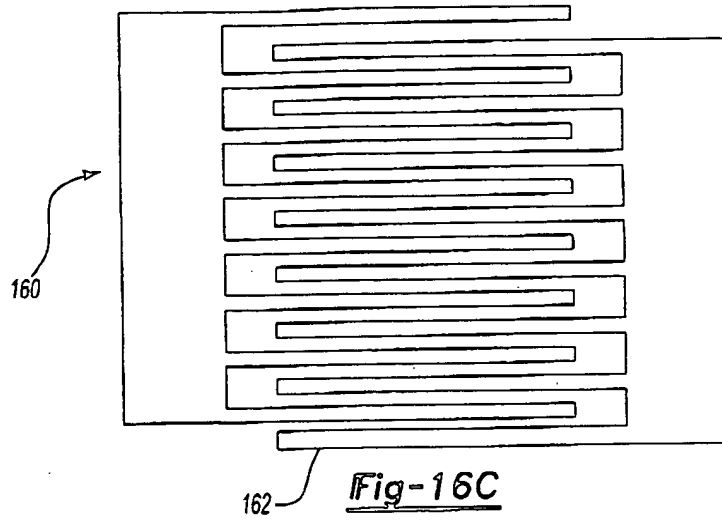
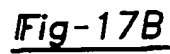
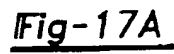
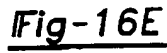


Fig-16D

TITLE: AF.

APPLICANTS: PAUL MANSKY ET AL.  
 APPLICATION NO: 00010485

22/25



TITLE: AP: TUS FOR RAPID SENSOR-ARRAY BASED MATERIALS CH. TERIZATION  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
23/25

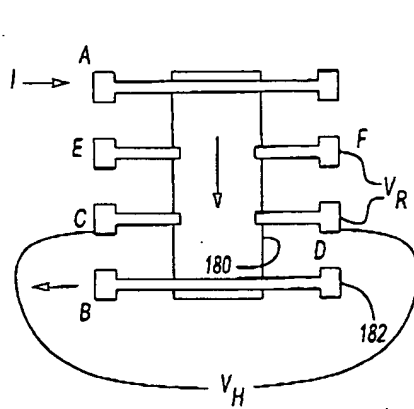


Fig-18A

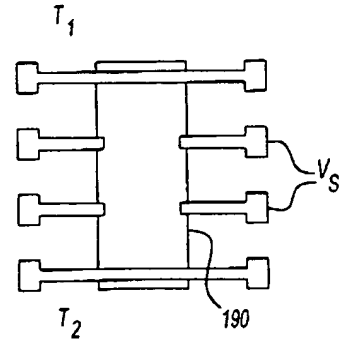


Fig-19A

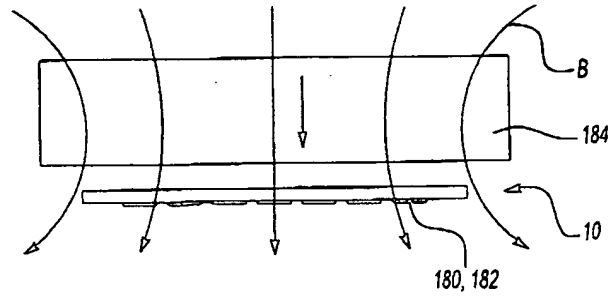


Fig-18B

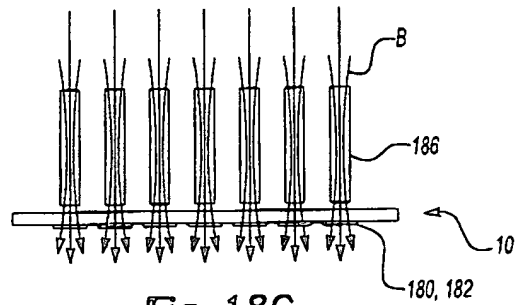
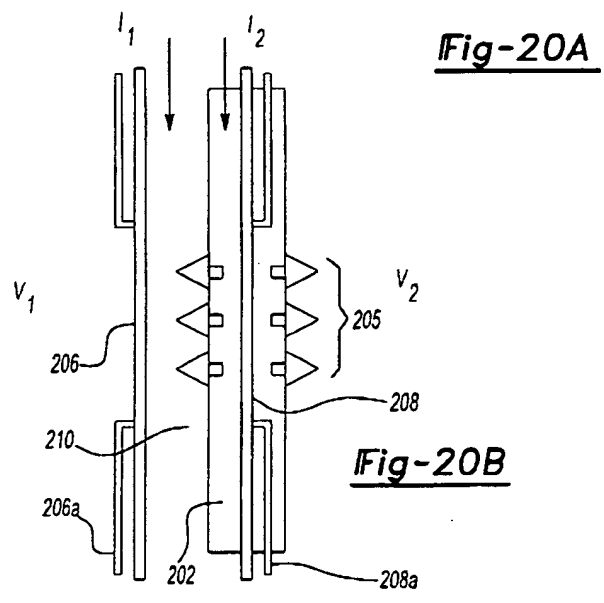
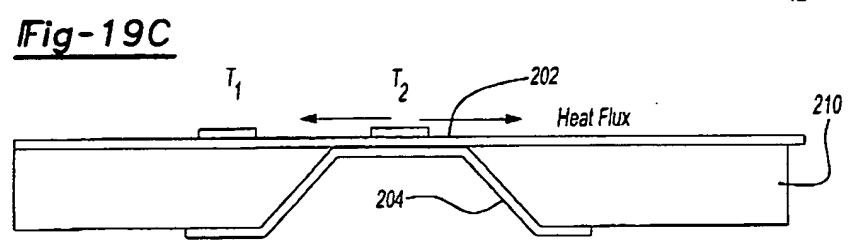
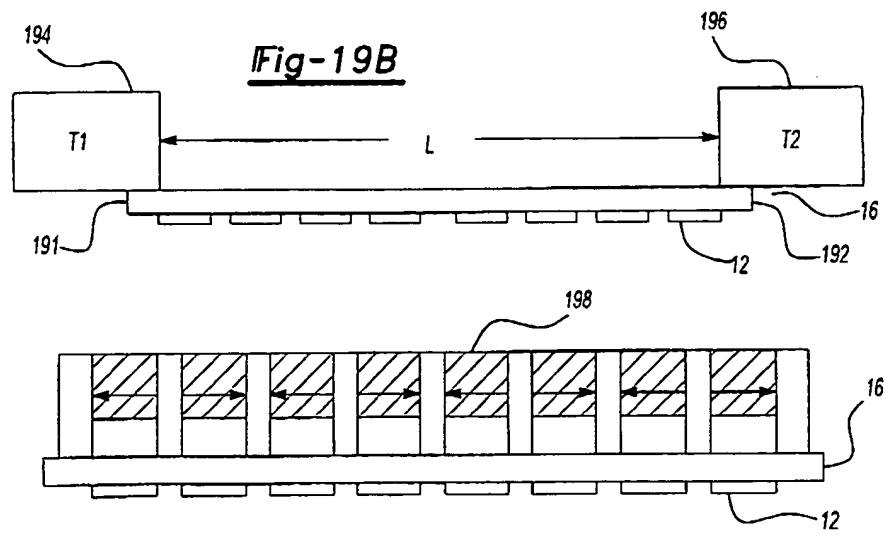


Fig-18C

TITLE: AF. TUS FOR RAPID SENSOR-ARRAY BASED MATERIALS CH TTERIZATION  
APPLICANTS: PAUL MANSKY ET AL.  
APPLICATION NO.: 09/210,485  
24/25



**Fig-20B**

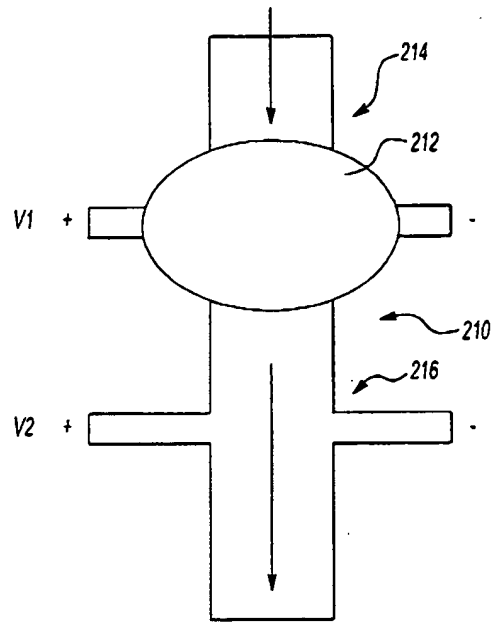


Fig-21A

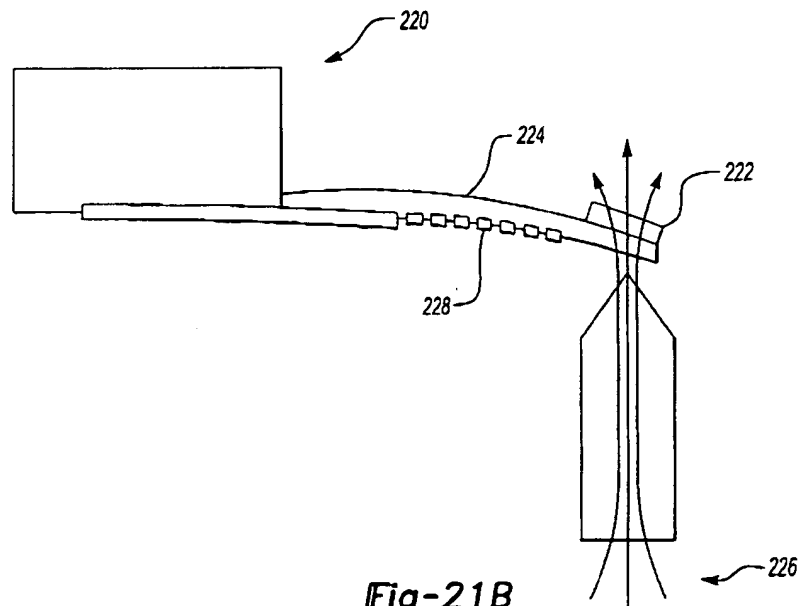


Fig-21B